

## EARLY WARNING IN E-SERVICE MANAGEMENT SYSTEMS

### ABSTRACT OF THE DISCLOSURE

An arrangement is provided for generating early warning of threshold violations in e-service management systems. The behavior of a variable is modeled statistically based on a plurality of data values of a variable collected over a period of time. The modeling generates a behavior model for the variable, represented by a set of model parameters. An early warning for a threshold violation of the variable with respect to a threshold is generated based on the behavior model and a plurality of data values of the variable collected online. The abnormal behavior of the variable is detected or forecasted according to online data values of the variable and the early warning generated.